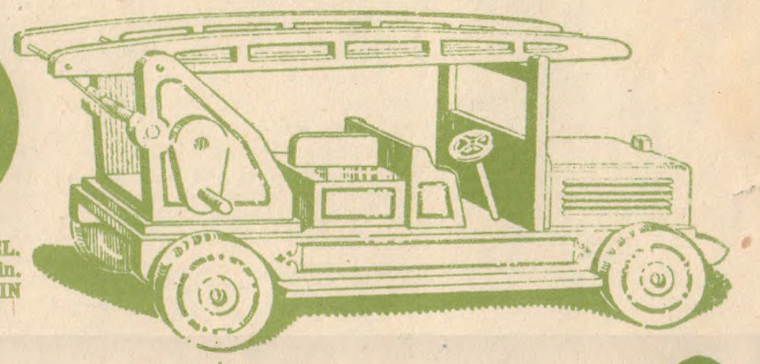
Hobbies DESIGN

No. 2888 7-3-51

SUPPLEMENT TO HOBBIES No. 2888.

MECHANICAL FIRE ENGINE



SIZE:—LENGTH 12½ins. WIDTH 4ins.

PANELS OF WOOD REQUIRED FOR THIS DESIGN

TWO Q4 ONE Q3 ONE G4

Materials for making this design are supplied by HOBBIES LIMITED, Dereham, Norfolk.

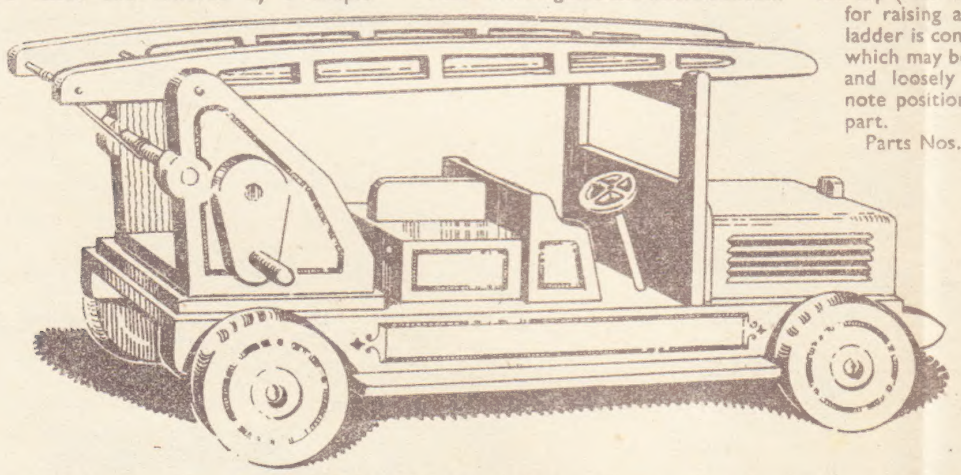
Price on application.

PRINTED IN ENGLAND.

How to make the Pull-Along Model Fire Engine

HERE is another easily constructed pull-along model, which will give endless fun to the youngster. It is a simple straightforward piece of work, both in the cutting and putting together, and in the final finishing in paint.

The model, as can be seen, is of a simplified type of modern fire engine, complete with escape ladder which can be raised and lowered by a simple mechanical means. The overall length of the engine and ladder is 12½ins. and the height with ladder lowered and resting on its support, is 5½ins.



Full patterns for making will be found on the other side of this sheet. These patterns can be pasted to the wood, or the outlines of each part traced through carbon paper or ordinary tracing paper.

If the paper pattern itself is pasted down to the wood, it will, of course, have to be cleaned off later with glass-paper. As, however, there are quite a number of parts square or oblong in outline, the simplest way of transferring these to the wood, is by laying the patterns on the wood and pricking the corners with a sharp pointed instrument. These points can then be connected up with pencil, making a good solid line along which to cut.

In commencing to make the model, we take in hand the main floor (No. 1). This is a plain oblong piece with a shallow recess at the front into which piece No. 4 will later fit. The two chassis sides (No. 2) on the sheet, will next be prepared by pasting down the patterns shown, direct to the wood, and cutting them out carefully and accurately.

These will be glued and nailed beneath No. 1 and flush with the edges (see detail Fig. 1). Holes will be bored in these sides to take the fixing screws of the wheels. To ensure a firm fixing for the wheels, the stiffeners (No. 3) are cut to outline shown, and glued inside the sides (No. 2)—see detail Fig. 2 (A).

The Bonnet

Next in order of cutting and fixing will be part No. 4, the front of the bonnet. The double dotted line on the pattern of this part, indicates its position when fixed to floor No. 1. The sides and top of the bonnet are shown as Nos. 5 and 6 respectively on the patterns. The outline of these pieces may be pricked on the wood as previously suggested, ready for cutting. Clean up the edges and glue in place on the floor.

Piece No. 7—rear of bonnet—and also piece No. 8 can next be cut and glued together, and then glued to the bonnet sides and top, and to the floor. A couple of screws should be run up through the floor from beneath, into piece No. 7 to make a firm fixing.

The seat for the driver and his companion is made up of pieces Nos. 9, 10, 11 and 12. All these are carefully cut and glued up—see detail (B) Fig. 2. The seat at the rear of the driver's seat, consists of pieces Nos. 13, 14 and 15.

Note here that one of the pieces No. 13 is glued as a division along the middle of the top (No. 15). The mechanism used for raising and lowering the escape ladder is contained in a separate unit which may be made up independently, and loosely screwed to the floor; note position of pivot screw on this part.

Parts Nos. 16 and 17 are cut from the sheet and accurately glued and nailed together. The sides (16) are stiffened by adding the ¼in. rod shown, as 'cross spindle' in the detail Figs. 3 and 4, and also by the wire on which the ladder is supported and pivoted.

Take good care in fixing the sides No. 16 to the base No. 17 that they come immediately opposite each other so that the moving spindle which forms the winding drum will turn freely in the holes made for it. The drum is formed by gluing on the spindle the disc No. 20, and the ratchet wheel No. 23, sufficient clearance being allowed when spacing them, as the rod is passed through the holes in the sides. The actual makeup of these various parts is shown in the broken sectional detail Fig. 4.

Part (No. 18), the pawl, governs the ratchet wheel, and is loosely screwed to the inside face of the side (No. 16). It must be carefully fitted and fixed so that it drops into place in the ratchet wheel, to prevent its further turning when it is required to hold the ladder at any required angle.

Winding Mechanism

Note from the diagram Fig. 4 that the winding mechanism when finally made up and completed, rests on a square seating piece (No. 19) which is glued to the floor, and that the pivoting screw passes first down through piece No. 17, then on through No. 19, into the floor, No. 1. A thin metal washer should be added beneath the head of the pivot screw.

The crank (No. 21) is glued to the spindle, as shown in the details, sufficient clearance being allowed between the side for it to move freely. The steering wheel (No. 24) may be cut as a solid circle of wood, or it may have the rim and bars cut through, as shown by the dotted line, which would give a realistic effect. The rim and bars of the wheel may, of course, be just painted in, which would give the strongest form of wheel.

The steering pillar consists of a piece of ¼in. diameter rod 2ins. long. The wheel will be glued to the top of this, and the pillar then let into the hole in the floor, as indicated on the pattern sheet.

The Escape Ladder is an independent unit, and simply pivoted by the wire, as mentioned. The ladder is composed of the three pieces, one No. 25 and two No. 26.

Cut the three pieces carefully and accurately from the patterns given, noting the holes at the pivoted ends of No. 26, which take the pivot wire on parts No. 16, and the cross wire to which the cord is to be attached for raising and lowering the ladder.

The steps of the ladder, piece No. 25, will fit between the sides (No. 26) and will be glued and pinned, or fine screws would make a better job.

It must be remembered to drill the holes for the screws or pins, whichever are used, before the inside fretted openings are cut, so as to prevent the splitting of the wood. The method of connecting up the winding cord from the drum spindle, then under the cross spindle to the cross wire at the extreme end of the ladder, is shown in our final diagram in Fig. 5.

Finishing the Model

To finish the model, the two running boards (No. 27) are glued to the chassis sides (No. 2). Four turned wood wheels are supplied, with stout 1in. round-head screws for fixing them. A 1in. round-head screw is also provided for the pivot screw of the ladder turntable.

Little need be said regarding the painting of the fire engine, beyond that the wood should first be well cleaned and made smooth before the first coat is applied. When this has hardened it should be lightly glasspapered, and the finishing coat of paint or enamel put on.

Needless to say, the whole thing will be painted bright red, with, perhaps, grey to represent the tyres of the wheels, and black for certain lines, such as the vents on the bonnet sides and on the radiator front.

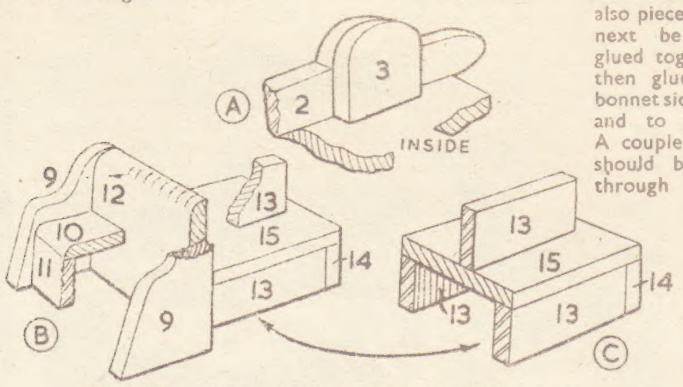


Fig. 2—The seats and detail of stiffener for wheels

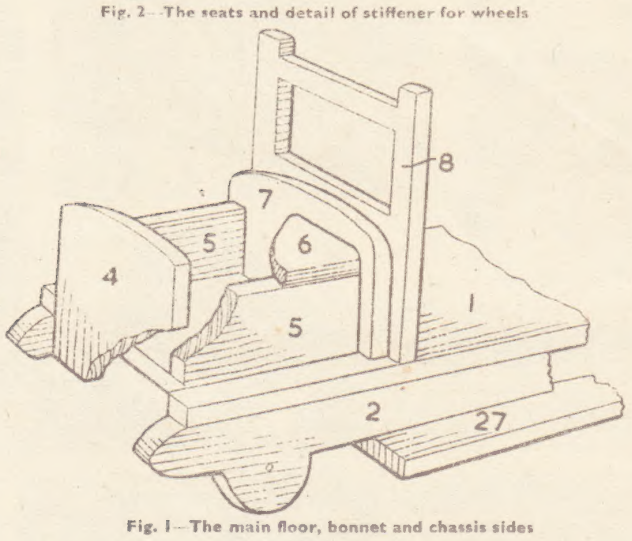


Fig. 1—The main floor, bonnet and chassis sides

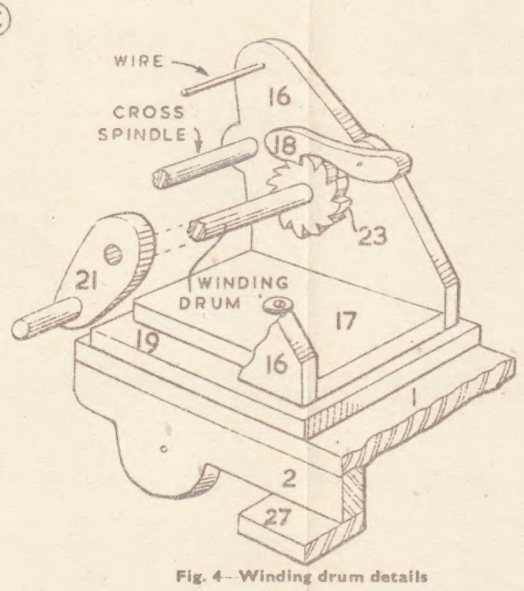


Fig. 4—Winding drum details

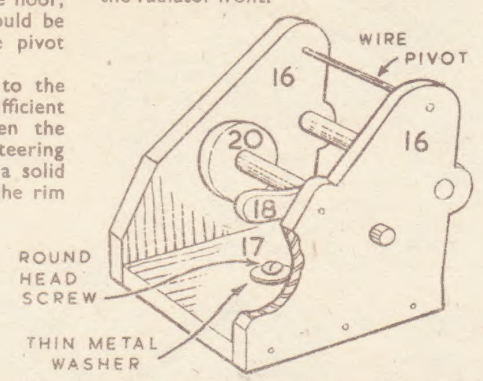


Fig. 3—How the escape ladder mechanism is pivoted to floor

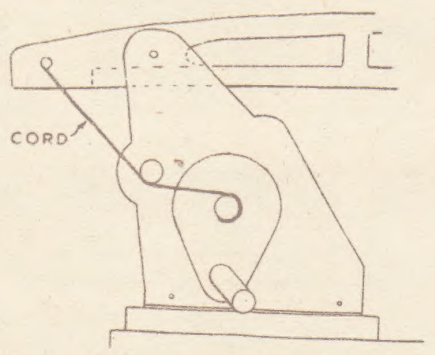


Fig. 5—The cord for working escape ladder